VDOT's Residential Traffic Management Tools in Fairfax County

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In recent years, concerns about traffic operations on residential streets have been increasing. In an effort to address thee concerns, VDOT has developed the following tools that are part of VDOT's Residential Traffic Management Program:

Through Truck Restriction - The aim of this restriction is to restrict through trucks from the excessive use of a residential street. This will reduce the adverse impacts of large trucks. The Board of Supervisors may request the Commonwealth Transportation Board to restrict trucks on a secondary highway classified as a local or collector road.

Cut-Through Traffic Policy - The purpose of cut-through measures is to reduce the amount and speed of external traffic that passes through a local residential street without stopping or having at least one trip end within the area. This policy allows for access restriction (ex. turning restrictions.) The County first conducts the study to ensure that the criteria are satisfied and the Board of Supervisors then requests VDOT to work with the County and community to prepare a plan that is presented at a public hearing for approval.

Traffic Calming – VDOT prepared a Traffic Calming Guide based on which a traffic calming pilot program was offered to the County. The aim of traffic calming is to reduce traffic speeds in residential areas through a variety of measures. At the Board of Supervisors' request staff of Fairfax County is in the process of preparing a list of projects to be included in the traffic calming pilot.

In Northern Virginia an additional tool, the Multi-Way Stop Policy, is also available to deal with residential traffic concerns. The aim of this policy is to reduce traffic speeds in residential neighborhoods. The request is made to VDOT based on community support and then submitted to the County Board of Supervisors for approval.

ADOPTED BY THE COMMONWEALTH TRANSPORTATION BOARD
MAY 9,1996

POLICY AND PROCEDURES

CONTROL OF RESIDENTIAL CUT-THROUGH TRAFFIC

POLICY ON RESIDENTIAL CUT-THROUGH TRAFFIC

It is Commonwealth Transportation Board policy that the Virginia Department of Transportation (VDOT) will recognize the problems associated with residential cut-through traffic and implement appropriate remedial measures wherever feasible.

INTRODUCTION

This policy and attendant procedures identify the specific responsibilities of VDOT and of the affected county/town in addressing concerns relating to cut-through traffic on local residential streets.

VDOT and the Counties/Towns are partners in the administration of these processes and procedures. A good working relationship between VDOT and the Counties/Towns is important for this partnership to function effectively.

DEFINITIONS

Residential Cut-Through Traffic is traffic passing through a specific residential area without stopping or without at least one trip end within the area. It is traffic that would be better served by the local street system intended for through traffic, but, for various reasons, uses the residential street system.

Local Residential Streets are streets within a neighborhood that provide direct access to abutting land uses and serve only to provide mobility within that locality.

Primary Use Area is all local residential streets within a community whose traffic operational characteristics may be altered by operational changes to the candidate street(s) for residential cut-through traffic study, or by a change to any street that provides access to that community.

PURPOSE

The purpose of these procedures is to provide clear guidelines for studying the issues of residential cut-through traffic and implementing the recommended remedial measures.

COUNTY/TOWN RESPONSIBILITIES

To initiate these procedures, the county/town must:

- Identify the problem of residential cut-through traffic.
- Request, by resolution of the local governing body, that VDOT review and address possible solutions to the identified problem. This request is submitted to the local resident engineer, along with the following support data.

Support Data Requirements

1. Functional classification of the street(s) in question at a local residential street and its relationship to the comprehensive plan.
2. Identification of the primary use area, including all streets that are accessed primarily by using the street(s)

in question and the associated peripheral roadway networks. Also, include the functional classification and relationship to the comprehensive plan for all streets in the primary use area.

3. Verification by the county/town that cut-through traffic on the local residential street to be studied is 40% or more of the total one hour, single direction volume, and that a minimum of 150cut-through trips occur in one hour in one direction. Acceptable planning techniques ma be used to determine the amount of cut-through traffic. A description of the technique used should be provided to VDOT along with the vehicle volume data.

4. Verification by the county/town that a petition outlining the perceived problem and signed by at least 75 percent of the total occupied households within the primary use area is valid.

5. Identification of alternative routes for through traffic if travel is restricted on the street(s) in question.

- It is suggested that the support data requirements be collected in the above order as a means of screening requests.

- It is further suggested that the county/town consider documenting procedures for performing its responsibilities.

- If the support data requirements are not met, the process is terminated, except as otherwise set forth herein.

VDOT
RESPONSIBILITIES

It is the responsibility of VDOT to complete a study of the roadway network identified in the formal request. This study will be conducted in the following four phases:

1. The resident engineer, upon receipt of the adopted resolution, will review and submit it, along with any recommendations, to the district administrator.

   When the county/town submits a study request to VDOT, a field meeting should be held between the county/town and VDOT staff. If a simple solution can be agreed upon at this meeting, an initial study or public hearings may not be necessary. VDOT should implement the solution and, following an after study, modify as needed.

   When the solution is expected to generate a great deal of public interest or to significantly impact access and traffic circulation, a task force of representatives from VDOT, county/town board of supervisors, and county residents may be formed to support and advise the study effort.

2. As directed by the district administrator, the district traffic engineer will conduct the necessary studies and the evaluation of the county/town request. The district traffic engineer's study may include, but not necessarily be limited to:

   - Detailed traffic counts on existing affected streets and potentially affected streets.

   - Intersection analyses on the proposed alternative route(s). (Residential cut-through traffic controls can be imposed only if there are acceptable alternate routes.)

   - Identification of potential adverse safety impacts.

   - Identification of the geometrics of the existing facilities in light of the traffic analysis.

   - Speed analyses on affected street(s).

   - Pedestrian circulation and safety analyses in the study area.

3. Subsequent to completing the necessary traffic studies, the district traffic engineer will provide the district administrator with his findings and recommendations. These recommendations will include alternatives for

addressing residential cut-through traffic, including any sketches or diagrams necessary to implement the alternatives and the impact of each alternative on the existing roadway network.

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4. The district administrator will determine the appropriate alternatives and advise the resident engineer, who will convey the findings and recommendations of VDOT to the county/town.

Note: If the local governing body and the district administrator fail to agree on the remedial measures to be implemented, the governing body may appeal to the Commonwealth Transportation Commissioner. The Commonwealth Transportation Commissioner will analyze all the supporting data and render a decision, which will be binding.

COUNTY/TOWN/VDOT JOINT RESPONSIBILITIES

1. The county/town, upon receipt of the VDOT findings and recommendations, shall solicit and receive written comments thereon from appropriate local agencies such as fire, police, rescue, school transportation, and so forth.

2. A formal public hearing shall be held jointly by VDOT and the county/town to provide for citizen input on the VDOT findings and recommendations. Advance notice of the public hearing must be provided by VDOT and will consist of:

   - VDOT publishing notice in a newspaper published in or having general circulation in the county/town once a week for two successive weeks.

- County/Town posting notice of the proposed hearing at the front door of the courthouse of the county/town ten days prior to the hearing.

- VDOT placing signs on the affected street(s) identifying, by name and telephone number or address, an individual to answer questions concerning the findings and recommendations.

3. The county/town shall furnish the resident engineer a synopsis and transcript of the public hearing and an approved resolution of the actions desired.

IMPLEMENTATION

Implementation of remedial measures to remedy the residential cut-through situation shall be accomplished through the following sequence:

- The resident engineer shall notify the appropriate local governing body and media of the action to be taken and of the estimated date of implementation.

- Signs will be placed on the affected street(s) identifying, by name and telephone number or address, an individual to answer questions concerning the pending action.

- The resident engineer will implement the remedial measures, some of which may be of temporary construction pending evaluation of their effectiveness.

EVALUATION

Evaluation of the remedial measures shall be accomplished as follows:

- After the remedial measures have been in place for generally not less than 30 days, but not more than six

months, the district traffic engineer will re-study the roadway network and convey his findings and any recommendations to the district administrator.

- The district administrator will review the district traffic engineer's report and will provide this information to the resident engineer for transmittal to the local governing body.

- If it is determined that the implemented remedial measures are not appropriate, the district administrator may terminate such measures and may consider alternate measures, with notification of such action to the local governing body. If the local governing body fails to agree on the remedial measure, it may appeal to the Commonwealth Transportation Commissioner. The Commonwealth Transportation Commissioner will analyze all the supporting data and render a binding decision.

- If it is determined that the implemented remedial measures are an appropriate action, the local governing body will identify the source of funding for any permanent construction, as needed.

FUNDING

Remedial measures utilized on local residential streets that meet the support data requirements set forth above may be fully funded with state secondary roads funds with concurrence of the local boards of supervisors.

CONTROL OF RESIDENTIAL CUT-THROUGH TRAFFIC FOR CERTAIN COLLECTOR ROADS AND LOCAL RESIDENTIAL STREETS NOT MEETING THE RESIDENTIAL CUT-THROUGH TRAFFIC SUPPORT DATA REQUIREMENTS

COLLECTOR ROADS

Some roads, although officially classified as collector, function more like local streets and remedial measures may be appropriate in these cases. Further, it is recognized that each county or town may have unique needs, and difficulties exist in applying a statewide policy to meet all of these needs. The collector roads mentioned above may otherwise qualify for remedial measures but their official classifications make them ineligible under the current support data requirements.

VDOT will therefore cooperate with those counties and towns who wish to pursue a more aggressive program to include certain collector roads provided an agreement is reached between VDOT and the county/town as to the types of remedial measures and the amount of VDOT funding participation (up to 50 percent of the cost) prior to any individual study being conducted.

LOCAL RESIDENTIAL STREETS NOT MEETING SUPPORT DATA REQUIREMENTS

For local residential streets not meeting the support data requirements (e.g., insufficient cut-through traffic,) VDOT will cooperate with those counties and towns who wish to pursue a more aggressive program provided an agreement is reached between VDOT and the county/town as to the types of remedial measures and the amount of VDOT funding participation (up to 50 percent of the cost) prior to any individual study being conducted.

MEMORANDUM OF UNDERSTANDING

Prior to providing remedial measures on individual collector roads and local roads not meeting the residential cut-through traffic support data requirements, a Memorandum of Understanding or Memorandum of Agreement shall be negotiated and agreed upon between the local government and the VDOT district administrator.

ALLOWABLE REMEDIAL MEASURES

Traffic control techniques that do not conform with national standard practices for the type of road where the proposed remedial measures are to be placed will be excluded. For example, a collector road identified for remedial measures can not have speed humps installed to discourage residential cut-through traffic. As a second example: Not that four way stops are acceptable.

PROCEDURES

Once the Memorandum of Understanding has been negotiated and agreed upon, processes and procedures as outlined for local residential streets shall be followed.

PROCEDURES FOR CONSIDERING REQUESTS FOR RESTRICTING THROUGH TRUCKS ON SECONDARY HIGHWAYS

The following action(s) is necessary to restrict through traffic on secondary roads in accordance with Section 46.1-171.2 of the Code of Virginia:

1. The local governing body must hold a legally advertised public hearing which must include:

   A. Public Notices for the hearing must contain a description of the route(s) of the proposed through truck restriction and the alternate rout(s) with the same termini. A copy of all Public Notices must be provided with the request.

   B. A public hearing must be held by the local governing body and a transcript of that hearing must be provided with the request.

   C. A copy of the adopted resolution describing the proposed through truck restriction and a description of the alternate, including termini, must be provided with the request.

   D. The local governing body must include in the resolution, that it will use its good offices for enforcement of the proposed restriction by the appropriate local law enforcement agency.

A failure on the part of the local governing body to comply with A, B, C, and D will result in the return of the request to the locality for compliance.

2. The local governing body must make its formal request through the Resident Engineer, certifying that it has met all the requirements noted in item #1. The Resident Engineer, upon acceptance of the truck restriction request, will forward it to the District Engineer. The District Engineer will forward the request to the State Traffic Engineer.

3. The State Traffic Engineer will advise the Secondary Roads Engineer of the request, and ask for information on any improvements scheduled for those route(s) proposed for restriction and those route(s) proposed as alternate (if Secondary Routes) along with any comments/recommendations which may be appropriate.

4. The State Traffic Engineer will secure and evaluate the following data:

   A. The functional classification for the route(s) proposed for restriction and the route(s) proposed as alternate.

B. A Traffic Engineering Study to include:

(1) Traffic volumes by vehicle type for the route(s) proposed for restriction and the proposed alternate rout(s). The date(s) the data is collected is to be included.

(2) A 12-hour origin/destination study of all trucks on the route(s) proposed for restriction. The date(s) the data is collected is to be included.

(3) The number and percentage of "through trucks" on the route(s) proposed for restriction. The date(s) the data is collected is to be included.

(4) Comparison of driving runs on the route(s) proposed for restriction and the alternate route(s), to indicate Travel Time/Distance penalties or savings.

C. An inventory of roadway characteristics and geometrics for the route(s) proposed for restriction and the alternate route(s). this inventory must include:

(1) Roadway length in miles

(2) Pavement width

(3) Number of travel lanes

(4) Shoulder width

(5) Pavement Type and condition

(6) Speed limit

(7) Number and Type of cultural environment (i.e. – residential and/or commercial)

(8) Vertical and horizontal alignment

(9) Parking restrictions and/or parking observed

5. The State Traffic Engineer will secure and evaluate all available accident data for the route(s) proposed for restriction and the alternate route(s).

6. Following receipt of all requested data and information, the State Traffic Engineer will conduct a traffic and engineering study of the restriction

request. A data "FACT SHEET" will be prepared. This report will be sent to the District Engineer for action in one or more of the following categories:

A. Publish a public notice of the proposed restriction, requesting written comment only

B. Publish a public notice of the proposed restriction and advise of the Department's willingness to hold a public hearing if requested

C. Publish a public notice of the time and place of a public hearing on the proposed restriction

If a public hearing is required, the District Engineer or his representative will hold the hearing in accordance with established procedures.

In conjunction with the publishing of the public notice, signs shall be erected at the terminus of the proposed restricted routes advising of the proposed restriction and listing an address for the public to send their written comments to. This signing shall be erected for a period of thirty (30) days. A copy of the public notice will be sent to the Virginia Trucking Association for distribution to the trucking industry and other interested parties.

7. The District Engineer will prepare a report which will include his recommendation and all pertinent materials (i.e. transcript of public hearing if held, copy of published public notice and any written or oral comments received.) This report will be sent to the State Traffic Engineer.

8. The District Engineer will review all data and material in addition to the District Engineer's recommendation. A report will be prepared and submitted to the Assistant Chief Engineer recommending approval or denial of the proposed restriction. The following criteria will be considered in reviewing the proposed restriction:

   A. Reasonable alternate routing is provided. To be considered "reasonable," the alternate route(s) must be engineered to a standard sufficient for truck travel. The effect on the alternate routing will be evaluated for traffic and safety related impacts. If an alternate contains a Secondary route that must be upgraded, funds must be provided from the county secondary construction funds. The termini of the proposed restriction must be identical to the alternate routing and effectively equivalent to allow a time and distance comparison to be conducted between the two routings. Also, the alternate routing must not create an undue hardship for trucks in reaching their destination.

   B. The road requested for restriction is functionally classified as local or collector.

C. The character and/or frequency of the truck traffic on the route proposed for restriction is not compatible with the affected area. Evaluation will include safety and other traffic engineering related issues, and will take into account the volumes of truck traffic in relation to the remaining traffic as indicated by the following table:

Total Traffic Volume Ranges	Total Truck Volume Ranges
4000	200
2000-4000	100-200
1000-2000	50-100
400-1000	20-50
250-400	13-20
50-250	3-13

D. The engineering of the roadway and/or the accident history of the route proposed for restriction indicate that it is not suitable for truck traffic.

E. Within 150' of the existing or proposed roadway center line there must be at least 12 dwellings per 1,000 feet of roadway

Failure to satisfy at least (3) of the five (5) criteria will normally result in the rejection of the requested restriction.

9. The recommendation of the State Traffic Engineer, if approved by the Assistant Chief Engineer and Chief Engineer, will be presented to the Commissioner for consideration by the Commonwealth Transportation Board for their approval or denial of the proposed restriction.

10. Following board action the State Traffic Engineer will make all appropriate notifications.

11. If a request is received to rescind an existing "through truck" restriction the procedures outlined previously must be followed.

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Attached are "Guidelines for Considering Requests for Restricting Through Trucks on Secondary Highways" adopted by the Commonwealth Transportation Board on September 15, 1998, which have been incorporated in the above procedures.

Adopted by Commonwealth Transportation Board September 15, 1988

GUIDELINES FOR CONSIDERING REQUESTS FOR RESTRICTING THROUGH TRUCKS ON SECONDARY HIGHWAYS

Section 46.1-171.2 of the Code of Virginia provides:

> "The State Highway and Transportation Board (formerly Commission) in response to a formal request by a local governing body, after said body has held public hearings, may, after due notice and a proper hearing, prohibit or restrict the use by through traffic of any part of a secondary highway if a reasonable alternate route is provided, except in cities and any town which maintains its own streets, or any county which owns, operates and maintains its own system of roads and streets, by any truck or truck and trailer or semitrailer combination, except a pickup or panel truck, as may be necessary to promote the health, safety and welfare of the citizens of the Commonwealth. Nothing herein shall affect the validity of any city charter provision or city ordinance heretofore adopted."

To conform to requirements of the Code, the local governing body must hold a public hearing and make a formal request of the Department. To insure that all concerned have an opportunity to provide input concerning the proposed restriction and alternate route, the following must be adhered to:

(A) The public notices for the hearing must include a description of the proposed through truck restriction and the alternate route with the same termini. A copy of the notices must be provided.

(B) A public hearing must be held by the local governing body and a transcript of the hearing must be provided with the resolution.

(C) The resolution must describe the proposed through truck restriction and a description of the alternate, including termini.

(D) The governing body must include in the resolution that it will use its good offices for enforcement of the proposed restriction by the appropriate local law enforcement agency.

Failure to comply with (A), (B), (C) and (D) will result in the request being returned.

It is the philosophy of the Commonwealth Transportation Board that all vehicles should have access to the roads on which they are legally entitled to travel. Travel by any class of vehicle should be restricted only upon demonstration that it will promote the health, safety and welfare of the citizens of the Commonwealth. Following that philosophy, the Virginia Department of Transportation staff and

the Commonwealth Transportation Board will consider the following criteria in rewarding a requested through truck restriction.

(1) Reasonable alternate routing is provided. To be considered "reasonable," the alternate route(s) must be engineered to a standard sufficient for truck travel. The effect on the alternate routing will be evaluated for traffic and safety related impacts. If an alternate contains a Secondary route that must be upgraded, funds must be provided from the county secondary construction funds. The termini of the proposed restriction must be identical to the alternate routing and effectively equivalent to allow a time and distance comparison to be conducted between the two routings. Also, the alternate routing must not create an undue hardship for trucks in reaching their destination.

(2) The road requested for restriction is functionally classified as local or collector.

(3) The character and/or frequency of the truck traffic on the route proposed for restriction is not compatible with the affected area. Evaluation will include safety and other traffic engineering related issues, and will take into account the volumes of truck traffic in relation to the remaining traffic as indicated by the following table:

Total Traffic Volume Ranges	Total Truck Volume Ranges
4000+	200
2000-4000	100-200
1000-2000	50-100
400-1000	20-50
250-400	13-20
50-250	3-13

(4) The engineering of the roadway and/or the accident history of the route proposed for restriction indicate that it is not suitable for truck traffic.

(5) Within 150' of the existing or proposed roadway center line there must be at least 12 dwellings per 1,000 feet of roadway.

Failure to satisfy at least three (3) of the five (5) criteria will normally result in the rejection of the requested restriction.

The Commonwealth Transportation Board, from time to time as appropriate and when deemed necessary, may modify and/or revise any provisions or criteria contained in these guidelines.

MULTI-WAY STOPS IN RESIDENTIAL COMMUNITIES

There has been an ongoing concern with the residents of Northern Virginia regarding commuter traffic flow through their subdivisions. A state-wide policy was developed to address these concerns, and to facilitate reductions in cut-through traffic volumes. While this policy has been effective in some communities, the Virginia Department of Transportation is frequently requested to install multi-way stops.

The Virginia Department of Transportation uses the federal *Manual on Uniform Traffic Control Devices (MUTCD)* as its guideline for the installation of traffic control devices. One of the major objectives of these guidelines is to achieve uniformity. It is important for motorists to be able to recognize a traffic control device anywhere he might be travelling and react similarly.

According to the *MUTCD* stop signs should be installed on the minor approach to intersections. They are installed to assign right of way and to insure a safe flow of traffic. Stop signs should not be installed primarily as a speed control measure. Studies have been conducted in many areas of the country which have proven that speeds are only reduced in the immediate vicinity of the sign, and actually increase between signs as motorists try to compensate for any real or perceived loss of time. Another concern has been that a small percentage of motorists will totally ignore the signs.

Multi-way stops can be installed under *MUTCD* guidelines. Major considerations for this type of traffic control include balanced or near balanced traffic volumes with totals of 500 vehicles per hour for 8 hours; a pattern of angle type of accidents; and as a temporary control when a signal is urgently needed. Although very few intersections in Northern Virginia meet these criteria, multi-way stops have been installed in many locations. Some have been installed in conjunction with the cut-through policy as traffic deterrents. Others have been installed due to limited sight distance.

The public reaction to our installation of multi-way stops has been positive. We have also not created the types of problems that are usually cited to occur. It is believed that this type of control could be installed more frequently in residential areas with little adverse impact on the motoring public at large. However, this approach is contrary to federal standards and traffic engineering practices, therefore, it is imperative that the area residents support such installations.

For the above reasons a **Policy on the Installation of Multi-Way Stops in Residential Communities** has been developed, for the Northern Virginia District to address these concerns and give the citizens a sense of ownership in their communities.

POLICY ON MULTI-WAY STOPS IN RESIDENTIAL COMMUNITIES

1.) All requests to be written. Requests can be received from a Board of Supervisor Member, the affected community civic association or the County Office of Transportation or Public Works Division. Individual citizens need to request Multi-Way Stops through their Board of Supervisor Member.

2.) VDOT Traffic Engineering will review the request and determine if the street meets the following criteria.

a) Is the street part of a residential community?
b) Does the street have 100% residential frontage on both sides?
c) Does the street have a legal speed limit of 25 mph?

If the answer to each of the three criteria above (a, b or c) is yes, the other nearby streets within the community need to be reviewed to determine potential impacts on those streets, and appropriate recommendations made.

If the answer to any of the three criteria above (a, b or c) is no, then the request must be denied.

3.) VDOT Traffic Engineering will review the community streets to determine if there are any potential safety problems. If safety problems are identified, then the request will be denied.

4.) VDOT Traffic Engineering will suggest intersections based on intersection spacing, intersection geometry and other impacted streets in the community. VDOT will then forward the recommended intersections to the Local County Office of Transportation/Public Works Division.

- Multi-Way Stops should be installed between 800 to 1,000 ft. apart.
- Multi-Way Stops should be installed unless at least 3 approaches are in the state secondary system.
- Priority should be given to intersections with:

a) Sight Distance Problems

b) High Accident History

c) Intersections with Other Major Streets in the Community

d) High pedestrian Activity

5.) The Local County Transportation/Public Works Division will seek a resolution of support from the affected community. This could be in the form

of receiving a copy of the minutes from an official civic association meeting evidencing a majority vote for the multi-way stop. If there is no association, then a letter from the local supervisor member would suffice. Subsequently the Local County Transportation/Public Works Division will obtain the Board of Supervisors resolution, preferably stating they concur with VDOT's recommendation. The Board of Supervisors and Community residents should be made aware of the potential negative impacts of Multi-Way Stop installations.

- Negatively Impact Travel Times
- Reduced Motorist Compliance with the Regulatory Requirement the Sign Imposes
- Difficult for Police to Enforce
- Parking Restrictions within 30 feet of the Stop Signs
- Increased noise and air pollution

6) On all correspondence relating to multi-way stops for each request, the requesting part, Board of Supervisors Member and Office of Transportation/Public Works Division will be copied. This includes the denial letter and reasons why, plus any recommendations for the other streets in the community which are recommended for the Multi-Way Stop treatment.

7) At the request of the Board of Supervisors, a public informational meeting may be held, to be conducted by the County.